

REMARKS

Administrative Overview

In the Office Action mailed on July 12, 2007, claims 13–15, 17, and 19–21 were rejected under 35 U.S.C. § 102(e) as being anticipated by United States Patent Application Publication No. US 2004/0211251 to Lee et al. (hereinafter “Lee”); claims 13 and 16 were rejected under 35 U.S.C. § 102(e) as being anticipated by United States Patent No. 6,673,533 to Wohlstadter et al. (hereinafter “Wohlstadter”), and claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of United States Patent No. 5,308,649 to Babacz (hereinafter Babacz).

The Applicants hereby amend claims 1, 13, and 18, and hereby cancel claim 17. Support for the amendments to independent claims 1 and 13 can be found in the specification as originally filed at, for example, paragraphs [0009] and [0027] of its United States Patent Application Publication No. 2005/0196877, and in the claims as originally filed, such as in originally filed dependent claim 17, which is now cancelled. Claim 18 is amended to depend from amended independent claim 13, rather than from now cancelled dependent claim 17. No new matter is introduced by these amendments. After entry of these claim amendments, claims 1–16 and 18–21 will be pending in this application, with claims 1–12 withdrawn.

The Applicants note that the Examiner originally required a restriction between product and process claims. Accordingly, as the process claims (*i.e.*, withdrawn claims 1–12) have been amended to include all the limitations of amended independent product claim 13, the Applicants respectfully request that claims 1–12 be rejoined, in accordance with the provisions of MPEP § 821.04(b), if amended independent product claim 13 is found to be allowable.

The Applicants respectfully request the reconsideration of claims 13–16 and 18–21 in light of the amendments made above and the arguments presented below, and the withdrawal of all rejections.

The Examiner’s rejections are addressed in the order in which they appear in the Office Action.

Amended Claims 13–15 and 19–21 are Patentable over Lee

Claims 13–15, 17, and 19–21 are rejected under 35 U.S.C. § 102(e) as being anticipated by Lee. Claim 17 is hereby cancelled, thereby rendering the rejection of that claim moot. The Applicants respectfully traverse this rejection as applied to claims 13–15 and 19–21, as amended.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See MPEP § 2131. The Applicants respectfully submit that Lee fails to meet this exacting standard as applied to Applicants' amended independent claim 13. Specifically, claim 13 requires "a diaphragm comprising a conductive portion, a first face, and a second face" and "a means for equalizing a pressure on each of the first and second faces of the diaphragm." The Applicants respectfully submit that Lee does not teach or suggest at least this latter claim limitation, which, in certain embodiments, reduces mechanical damping and improves sensor resolution.

Lee appears to describe "a transducer comprising a substrate and a thin membrane having a particular shape that can be deflected relative to the substrate to provide an amount of membrane deflection useful for sensing or actuation purposes. The membrane may be deflected as a result of surface stress induced by an interaction with a medium." Lee at para. [0015]. In one embodiment, "the thin membrane includes an interior surface subjected to gas pressure to impart and maintain a working convex dome shape thereto." Lee at para. [0017].

Lee does not describe, however, a means for equalizing a pressure on each of a first and second face of the thin membrane, as is recited in Applicants' amended independent claim 13. The Examiner appears to suggest that paragraph [0151] of Lee describes such a structure, but, in actuality, when read together with paragraph [0150] of Lee, it is clear that those paragraphs describe internal pressurization techniques for applying internal gas pressure to the inner surface of the membrane in order to "**impart and maintain the dome shape thereto.**" Lee at para. [0150]. Clearly, in order to impart and maintain the dome shape of the membrane using a gas, the pressure on the inner surface of the membrane must necessarily be greater than a pressure on the outer surface of the membrane. Accordingly, Lee not only fails to teach pressure equalization, but in fact teaches just the opposite. Because pressure equalization in accordance with claim 13 would render Lee's device inoperative, Lee cannot possibly teach or suggest the limitations of Applicants' amended independent claim 13.

Therefore, the Applicants respectfully submit that amended independent claim 13, and claims 14, 15, and 19–21, which depend therefrom, are patentable over Lee.

Amended Claims 13 and 16 are Patentable over Wohlstadter

Claims 13 and 16 are rejected under 35 U.S.C. § 102(e) as being anticipated by Wohlstadter. The Applicants respectfully traverse this rejection as applied to the claims, as amended.

As mentioned above, Applicants' independent claim 13 is hereby amended to incorporate the subject matter of now cancelled dependent claim 17, namely "a means for equalizing a pressure on each of the first and second faces of the diaphragm."

Wohlstadter appears to describe devices and methods "for conducting one or more electrochemiluminescence assays." Wohlstadter at col. 9, ln. 57–59. With reference to FIG. 69 of Wohlstadter, "[a]n assay system 690100 for conducting ECL assays in a disposable cartridge 69090 with an instrument 690101 is illustrated . . . Cartridge 69090 includes a base 69091, a diaphragm 69092, a counterelectrode 69093, . . ." Wohlstadter at col. 78, ln. 44–47. Nowhere, however, does Wohlstadter describe, and nowhere does the Examiner contend that Wohlstadter describes, "a means for equalizing a pressure on each of the first and second faces of the diaphragm," as is recited in Applicants' amended independent claim 13.

Accordingly, Wohlstadter does not teach or suggest all of the elements present in Applicants' amended independent claim 13. Thus, the Applicants respectfully submit that amended independent claim 13 and claim 16, which depends therefrom, are patentable over Wohlstadter.

Amended Claim 18 is Patentable over Lee in view of Babacz

Claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Babacz. The Applicants respectfully traverse this rejection as applied to the claim, as amended.

To demonstrate a prima facie case of obviousness, all of the limitations of the claim at issue must be taught or suggested by the prior art reference(s) relied upon in support of the rejection. See MPEP § 706.02 (j) and § 2143. The Applicants respectfully submit that neither Lee nor Babacz, alone or in proper combination, teaches or suggests all of the limitations of the Applicants' amended independent claim 13, and therefore do not establish a prima facie case of obviousness of claim 18, which depends therefrom.

As previously discussed, Lee fails to teach or suggest "a means for equalizing a pressure on each of the first and second faces of the diaphragm." The Applicants respectfully submit that Babacz fails to cure this deficiency in Lee.

Babacz appears to describe apparatus and methods “for biasing the surface of a polymeric substrate, such as a container, to enhance the formulation of barrier coatings on the external portions of such substrates.” Babacz at col. 1, ln. 7–10. As a threshold matter, however, nowhere does Babacz describe “a diaphragm comprising a conductive portion, a first face, and a second face.” Absent the diaphragm, Babacz necessarily can not, and in fact does not, describe “a means for equalizing a pressure on each of the first and second faces of the diaphragm.”

Accordingly, the Applicants respectfully submit that Lee and Babacz, even if combined, do not fulfill the requirements of Applicants’ amended independent claim 13 and, therefore, do not legally establish a prima facie case of obviousness of claim 18, which depends therefrom. The Applicants, therefore, respectively submit that dependent claim 18 is patentable over Lee in view of Babacz.

CONCLUSION

In light of the foregoing, the Applicants respectfully submit that claims 13–16 and 18–21 are in condition for allowance. Accordingly, the Applicants respectfully request reconsideration, withdrawal of all grounds of rejection, and allowance of claims 13–16 and 18–21 in due course. In addition, the Applicants respectfully request that claims 1–12 be rejoined, in accordance with the provisions of MPEP § 821.04(b), and that those claims also be allowed in due course.

If the Examiner believes that a telephone conversation with the Applicants' attorney would be helpful in expediting the allowance of this application, the Examiner is also invited to call the undersigned at the number identified below.

Respectfully submitted,

Date: October 1, 2007
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